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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,901	02/08/2002	Tsutomu Totani	181A 3232	2267

7590 12/10/2003

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/10/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,901

Applicant(s)

TOTANI ET AL.

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alves et al. (US patent 5,956,844) in view of Werrbach (US Patent 6,266,423). Alves et al. discloses an audio adapter (Figure 1) used with a vehicle audio system including a power amplifier (amplifier 12), a head unit serving as a tuner (stereo unit 11), and a plurality of loudspeakers (loudspeakers 13) provided in a vehicle compartment, the audio adapter comprising a connection between channels of stereo unit and amplifier (Alves et al. discloses connection between receptacles (i.e. channels) at stereo unit and amplifier) (Column 1, lines 2-25). Alves does not disclose a transformer matching an output impedance of the stereo unit with an input impedance of the amplifier or adjusting an output level of the head unit to an input level of the power amplifier.

Werrbach discloses a circuit (Figure 4) for matching an output impedance of a microphone (reference 10) with an amplifier (reference 40) (Werrbach discloses matching various impedances of different components) (Column 2, lines 43-47).

Werrbach further discloses a limiting device to prevent overloading of the microphone output to the amplifier (i.e. adjusting the output level of the audio source to input level of the amplifier) (Column 2, lines 48-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use impedance matching along with matching source output and amplifier input levels to prevent amplifier overload and to maintain signal at a selected level as it passes to the amplifier producing a higher quality audio output.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alves et al. as modified as applied to claim 1 above, and further in view of Kim (US Patent 5,327,505).

Regarding Claim 2, Alves et al. as modified discloses an adapter as stated above apropos of claim 1 but does not disclose windings generating a center and woofer signal. Kim discloses a sound reproducing system (Figure 6) comprising a first and second loudspeakers (speakers 30 and 32) including respective transformers having respective secondary windings (windings from leads 12A and B; and leads 14 A and B) and connected in parallel with each other, and a circuit for generating a mixed signal of a first loud speaker signal (12A and 14A) and a second loud speaker signal (12B and 14B) by connecting the secondary windings of the transformers of the first and second

loud speakers in parallel with each other so that a center speaker signal (input to speaker 30) and a woofer signal (input to speaker 32) are generated. Kim teaches that the system has no appreciable energy losses or changes in frequency characteristics (Column 1, lines 53-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use transformers to produce a center and woofer signal with no appreciable energy loss for a higher fidelity audio signal.

Regarding Claim 4, Kim further discloses a sound reproducing system (Figure 6) comprising a first loud speaker and a second loud speaker (speakers 30 and 32), a transformer having primary side including two windings (windings from leads 14A and B) and a secondary side including one winding (right hand side of transformer 24B), the two windings of the primary side serving as transformer inputs of the first (input 14A) and second (input 14B) loud speakers respectively, the winding of the secondary side serving as a mixed signal output of first and second loud speaker signals.

Regarding Claim 3, Alves et al. as modified discloses an adapter as stated above apropos of claim 1 but does not disclose windings producing a mixed signal. Kim discloses a sound reproducing system (Figure 6) comprising a first loud speaker and a second loud speaker (speakers 30 and 32), a transformer having primary side including two windings (windings from leads 14A and B) and a secondary side including one winding (right hand side of transformer 24B), the two windings of the primary side serving as transformer inputs of the first (input 14A) and second (input 14B) loud speakers respectively, the winding of the secondary side serving as a mixed signal output of first and second loud speaker signals. Therefore, it would have been obvious

Art Unit: 2644

to one of ordinary skill in the art at the time the invention was made to use transformers to produce signal with no appreciable energy loss for a higher fidelity audio signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JIM


XU MEI
PRIMARY EXAMINER